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L13: Entry 1 of 2 File: USPT May 7, 2002

DOCUMENT-IDENTIFIER: US 6384851 B1
**** See image for Certificate of Correction ****
TITLE: Apparatus for facilitating observation of the screen upon reproduction

Detailed Description Text (11):
Numeral 24 represents a digitizer, through which coordinates of a desired position on the display screen can be input by moving a pen (44 in FIG. 2) on this digitizer. The present embodiment will be described in the form of an example in which the digitizer 24 is overlaid on the display device 26, as shown in FIG. 2, whereby information of an arbitrary point, a trace, or the like can be input as if to overlay it on an image displayed in the display device 24, but this coordinate input means is not limited to the example of the overlay on the display device. For example, the coordinate input means may be of a tablet type, in which the input device is placed on a desk separately from the display device and in which the coordinate information of a point, a trace, or the like can be input through the coordinate input device on the desk with observing the screen. If only rough data is handled, the coordinate input means can be a touch panel of a pressure sensitive type for designating an arbitrary point by finger.

Detailed Description Text (15):
Numeral 38 indicates a modulator/demodulator (modem) for frequency modulating a signal to be transmitted to a frequency band suitable for a telecommunication line and for demodulating a modulated signal from the telecommunication line, and 40 a communication control circuit for controlling connection and communication with the telecommunication line, including establishment of a communication protocol, under control of the CPU 10. The telecommunication line can be a line used for transmission of information, such as a public line or LAN. Numeral 39 stands for a data bus for exchange of data between the components.

Detailed Description Text (17):
Image input/creation means 50 outputs to input control/memory means 56 data of an image read through the image input/output device 34 or an image of a document including a text created using the keyboard, etc., by word processor or plotter software to operate on this apparatus. Coordinate input means 52 is the digitizer 24, which calibrates and times the coordinates input through the pen 44 to output corrected coordinate values to the input control/memory means 56. Voice input means 54 performs analog digital conversion of a voice signal input through the handset 30 to output a digital signal to the input control/memory means 56. The outputs from these means 50, 52, 54 are supplied to the input control/memory means 56 to be stored as data.

Detailed Description Text (20):
Communication control means 64 on the reception side receives the information through the public line and writes the received data in memory means 66. In response to a disclosure request from the user on the reception side, output control means 68 reads the data of received image specified by the user from the memory means 66 and supplies the data to image output means 72 (the printer section of the image input/output device 34) and/or to display means 74 (the display device 26 and display control means 68). When the data is accompanied by voice/locus data, the output control means 68 first supplies the received image to the display means to make the display means display the received image and also supplies the locus data to the display means 74 and/or the voice data to voice output means 76 in accordance with a reproduction instruction of voice/locus given by the user. This causes the locus input on the

transmission side to be displayed at the same position and at the same speed as those of the input locus on the transmission side so as to be overlaid on the received image displayed on the display means 74. In synchronism with this, the voice is reproduced at the same timing as that of the voice input together with the locus. For printing the received image on paper, the image output means 72 is used. Although in FIG. 3 the functions of input and output of image, coordinates, voice, and text are illustrated separately on the transmission side and on the reception side, the apparatus in the present embodiment is ready for both transmission and reception as shown in FIG. 1 and FIG. 2, so that the same apparatus can perform both input and output of image, coordinates, voice, and text. Accordingly, after inputting and editing the image, coordinates, voice, and/or text on the transmission side, the user can check the data by reproducing the image, locus, voice, and/or text having been entered, by use of the display device, the handset, or the image output device; on the reception side to receive the data, the user can not only reproduce the received data, but also input an additional image, coordinates, voice, and/or text in the received data or edit the received data by use of the mouse, keyboard, digitizer, handset, or image input device.

Detailed Description Text (22):
FIG. 4 illustrates an example of a document prepared for explaining the way to a hospital, in which in a document window 410 there are displayed a text 401 (made up of characters, or loci, each made up of one or more strokes, which also are loci) of explanation entered through the keyboard 22, "The way to the hospital"; a text 402 entered through the keyboard 202, to describe the telephone number and consultation hours; an image 403 of a map around the hospital, entered through the scanner section of the image input/output device 34 or from another terminal equipment through the public line; loci 404 to 406 entered through the mouse 20 or through the digitizer 24; and icons 407 to 409 to indicate entries of dynamic locus information and voice and to enable to designate reproduction of a dynamic locus or sound by clicking either one of them by the mouse 20 or by the digitizer 24. The "clicking" means depressing the button of the mouse 20 or dropping the pen down onto the digitizer 24, and it is determined according to the clicking that the user selected the information on the display screen corresponding to the coordinates of the position of the mouse cursor at that time or the coordinates of the position of pen down, for example an object displayed at that position. "Dynamic stroke" herein, as will be detailed hereinafter, means a piece of stroke data that holds not only the coordinate information of the stroke but also time information about input time of each of the coordinate data and that thus enables reproduction of a locus at the "as-input" speed, according to the time information.

Detailed Description Text (23):
By turning the microphone (voice input means) on upon entry of the dynamic stroke, an explanation by voice can also be entered, in addition to the coordinate information entered as locus data. For example, upon entry of the locus 405 of FIG. 4, the user says (or otherwise inputs voice data for) "this junction of five roads" at the time when the drawing of the locus reaches the junction of five roads, and also says "turn to the right at the corner of the bookstore" at the time of input of the locus turning at the corner of the bookstore, which enables one to input information that is easier to understand.

Detailed Description Text (26):
The preparation of document is carried out in the document window 410 displayed on the display screen of the display device 26. When the document window is opened, a parameter to indicate a current mode stored in the MEM 14 is initialized (S2). Occurrence of an event is detected by whether some information is intended to be entered through the input device, i.e., through the mouse 20, keyboard 22, digitizer 24, microphone 30, or image input means 34 (S4), and thereafter a kind of the event detected will be determined in S6 to S10. If in S6 the event is determined to be an end event, for example, by clicking on the end button on the display screen through the mouse 20 or the digitizer 24, this operation will be terminated. If in S8 the event is determined to be an entry of character code from the keyboard 22, the process will move to a character input routine of S26. In this character input routine, characters entered from the keyboard 22 are successively displayed in the form pursuant to the document format stored in the memory 14, at the position of the cursor 702 for character input displayed on the document preparation window 410 of FIG. 7. A

character group entered through the keyboard 22, i.e., text data is stored in the MEM 14.

Detailed Description Text (29):
The button 801 is a draw mode instruction button for providing an instruction of switch to a draw mode, the button 802 an edit mode instruction button for providing an instruction of switch to an edit mode, the button 803 an eraser mode instruction button for providing an instruction of switch to an eraser mode, the button 804 a record pen instruction button for providing an instruction of switch to a record pen mode, the button 805 an undo instruction button for providing an instruction for canceling a previous operation and restoring the status before the previous operation, the button 806 a cut button for providing an instruction for cutting data in a range designated, out of the screen, the button 807 a copy button for providing an instruction for holding data in a range designated, in another area while leaving the data on the screen, the button 808 a paste button for providing an instruction for displaying the data in the range specified by the cut or copy operation at a position designated, the button 809 a clear button for providing an instruction for deleting data in a specified range from the screen, the button 810 a smooth button for providing an instruction for smoothing a coordinate string of locus data designated, the button 811 an engross button for providing an instruction for engrossing locus data specified to a shape designated out of a straight line, a circle (an ellipse or a perfect circle), a triangle (normally, an isosceles or equilateral triangle), and a rectangle (an oblong or a square), the button 812 a rotate button for providing an instruction for changing data in a designated range to rotate what is displayed, the button 813 a resize button for providing an instruction for displaying a change instruction button to change the size of data in a designated range and for changing the size of the data according to the operation of the button, the button 814 a group button for providing an instruction for grouping plural items of designated stroke data, the button 815 an ungroup button for providing an instruction for ungrouping plural items of stroke data designated into separate independent data items not grouped, the button 816 a full select button for providing an instruction for selecting all data composing one document displayed in the document preparation window 410, the button 817 a pen set button for providing an instruction for displaying a screen for changing an attribute of the pen for inputting a locus, i.e., an attribute of the locus (line color and thickness), and the button 818 a reproduction start button for providing an instruction for reproducing the dynamic stroke and voice data. When this reproduction start button 818 is clicked, the dynamic stroke and voice data included in that document are reproduced in the input order, or plural objects selected are reproduced in a selected order. Numeral 819 indicates a volume window to display an image of a swinging needle, thereby indicating the advance of input of voice data or the advance of reproduction, and numeral 820 a volume adjust bar to indicate the volume of reproduced voice and to permit the user to drag the bar up and down to change the position, thereby adjusting the reproduction volume of voice.

Detailed Description Text (30):
When the current mode is not the edit mode but either one of the draw mode, the eraser mode, and the record pen mode, the pen menu at that time is different from the one shown in FIG. 8 but is one like the pen menu 901 shown in FIG. 9, which is composed of the draw mode button 801, the edit mode button 802, the eraser mode button 803, the record start button 920 for giving an instruction for starting sound recording, the undo button 805, the volume window 819, and the record pen set button 910 for giving an instruction for displaying the screen for changing the attribute of the pen for input of a dynamic locus, i.e., the attribute of the dynamic locus (color of line and thickness of line), and the attribute of voice (volume and presence/absence of compression process). Once the record start button 920 is clicked, a record end button 921 is displayed instead of the record start button, however.

Detailed Description Text (34):
The record pen set dialog box 902 is composed of a pen color set area 911 including palettes for displaying colors of the pen that can be set by switch, and an area for displaying a color selected; a pen thickness set area 912 to indicate a list of thickness of the pen that can be set, and a thickness selected; a record set area 913 to indicate a button for on or off of recording of voice data with a locus every click of the button and a bar for controlling the record volume; and a record compression set area 914 to give an instruction to turn on or off voice compression. The operator

sets arbitrary attributes on this record pen set dialog box 902 by use of the mouse 20 or the digitizer 24 and thereafter starts input. The attributes set in the record pen set dialog box 902 are held in the MEM 14 and the attribute data in the MEM 14 is also changed every reset of attributes.

Detailed Description Text (35):
FIGS. 6A and 6B illustrate the flowchart of the process in the record pen mode of S24, and the following explains the process for entering data of plural objects comprised of dynamic stroke or voice data. Here, an "object" denotes an object including all data entered during a period between a press of the record start button 920 and a press of the record end button 921. The icons 407 to 409 of FIG. 4 are displayed for every object.

Detailed Description Text (36):
Now, let us explain the input process of dynamic stroke and voice data by the record pen, referring to the flowchart of FIGS. 6A and 6B.

Detailed Description Text (39):
When the recording device is determined to be available in S34, the processor checks whether the microphone button (a switch button for on/off of record) is on in the record set area 913 in the record pen set dialog box 902, by reading it from the MEM 14 (S36). When the microphone button is on, the record routine 38 is started (S38) and the process of S38 for recording the voice data in the MEM 14 is carried on until it is determined in S42 that an instruction of end is given by a click on the record end button 921 or until a timeout occurs by a decision that the recording time is over a time preliminarily determined and held as a predetermined time in the MEM 14.

Detailed Description Text (42):
When it is determined in S42 that an instruction of end is given by a click on the record end button 921 or that a timeout occurred over the time preliminarily determined and held as a predetermined time in the MEM 14, it is determined what kind of data was recorded in S38 and S40 (S44), and the program branches to processes in the case of the both voice data and stroke data, in the case of only the voice data, and in the case of only the stroke data. In the example shown in FIG. 4, the object corresponding to the icon 408 includes the both voice data and stroke data, the object corresponding to the icon 407 includes only the stroke data, and the object corresponding to the icon 409 includes only the voice data. It is possible to notify the operator of a kind of data of each object by using the different types of icons according to the data kinds of objects.

Detailed Description Text (43):
When the kind of recording is the voice data and stroke data, the processor reads a parameter to indicate whether compression is designated in the record compression area 914 in the record pen set dialog box 902 out of the MEM 14 (S46). When compression is designated, compression is carried out of the voice data stored in the MEM 14 in S38 (S48). When compression is not designated, the processor proceeds to S50.

Detailed Description Text (44):
With the voice data and stroke data (handwriting data) stored in the MEM 14 in S38 and S40, the processor performs steps to file the voice data (S50), to prepare a voice cluster (S52), to prepare a stroke cluster group (S54), to prepare a group cluster (S56), and then to return to the edit mode (S68). FIG. 11 shows the display screen in the middle of input of the stroke data and voice data before the affirmative decision in S42 and FIG. 12 shows the display screen after the affirmative decision in S42. In FIG. 11, the mouse cursor or the cursor to indicate the position designated by the pen is of the shape like 420 during the period between the click on the record start button 920 and the click on the record end button 921 and the record end button 921 is displayed in place of the record start button 920 in the pen menu. During recording of the voice data, the display is in a state in which the needle of the volume window 819 is swinging. In FIG. 12, because the both stroke data and voice data are entered, the screen displays the icon 408 to indicate presence of the both data recorded. The display position of the icon 408 is the left upper part of the circumscribed rectangle around the stroke data. It is, however, noted that the display position of the icon is not limited to this position, but the display position of the icon may be the right upper part of the circumscribed rectangle around the stroke,a position of coordinates

of first input, or any position determined so as not to overlay the stroke or the image and text below it. When only the voice data is given without input of stroke data, the icon is displayed at the default position.

Detailed Description Text (46):
When the kind of recording is determined to be only the stroke data in S44, the processor performs the process of S66, which is the same as S54, and then returns to the edit mode (S68).

Detailed Description Text (49):
The cluster data is the data structure stored in the MEM 14 where the stroke data and voice data are grouped to be handled as one object. For example, grouping of plural strokes drawn in the draw mode includes automatic grouping of those strokes where drawing intervals of the strokes (temporal intervals from pen up to pen down or positional intervals of the strokes) are smaller than a default value preliminarily determined and held as a parameter in the MEM 14, a posterior grouping which is effected on plural items of data selected by the operator at the time of clicking on the group button 814, and so on.

Detailed Description Text (50):
The normal stroke data is the data structure where one stroke drawn in the draw mode is stored as single data in the MEM 14.

Detailed Description Text (51):
The reproduction stroke data is the data structure where the data of the stroke entered in the record pen mode, which was expressed previously as a dynamic stroke, is stored in the MEM 14, including not only the coordinate data of the stroke but also the time information on entry of each coordinate position. However, the data of the all dynamic strokes included in one object is not held, but only data concerning one stroke therein is held.

Detailed Description Text (53):
Each of the cluster data, the normal stroke data, the reproduction stroke data, and the voice data is composed of a portion called a header including Ln (the size of the whole data), Ox (an x-coordinate of the left upper part of the circumscribed rectangle of data), Oy (a y-coordinate of the left upper part of the circumscribed rectangle of data), Cx (a horizontal width of the circumscribed rectangle of data), Cy (a vertical width of the circumscribed rectangle of data), St (an input start time of data), Et (an input end time of data), and Dk (a kind of data stored in the body part); and a portion called a body, including the data itself. In the body part, the normal stroke data includes the attribute data concerning the thickness and color of stroke, and a string of n coordinate points Pi (i=1 to n); the reproduction stroke data includes the attribute data concerning the thickness and color of stroke, a string of n coordinate points Pi (i=1 to n), and n pieces of time information Pit (i=1 to n) to indicate the time of entry of each coordinate point; and the voice data includes szVoiceFileName which is a file name storing the voice data.

Detailed Description Text (55):
Depending upon whether data of each cluster is the reproduction stroke data or the voice data, associated data is stored in the header part and in the body part.

Detailed Description Text (56):
Coordinate values of each data stated above are those along the coordinate axes with the reference at the left upper part of the document upon entry of data, and the reference coordinate axes are coincident with those of the text data.

Detailed Description Text (63):
The data of the i-th reproduction object is copied onto the working area in the MEM 14 (S76) and the icon of the i-th reproduction object is erased from the display screen (S78). It is determined if the i-th object includes a reproduction stroke (S80). If there is the reproduction stroke then the stroke is erased from the display screen (S82). Image data (for example, another stroke, text, image, or the like) located below the stroke is drawn in pixels where the reproduction stroke was erased.

Detailed Description Text (64):

FIG. 17 shows the display screen after the process of S82 in the state where the reproduction start button 818 was clicked with displaying the document exemplified in FIG. 4 to designate the first drawn object (the strokes 405 and 406 and voice data) as a reproduction object. The icon 408 and the strokes 405, 406 of the first object are erased from the screen.

Detailed Description Text (69):
The reproduction routine of S86 will be described referring to the flowchart of FIGS. 15A and 15B. The kind of the reproduction object is determined (S100), and the process is branched according to the both voice data and stroke data, only the voice data, or only the stroke data. This type of the object can be determined by analyzing the object data copied on the working area in S76 and referencing the Dk (kind) data of the header part in this data.

Detailed Description Text (70):
When the data of the reproduction object includes the both voice data and stroke data, the processor calculates a difference between the voice start time (St in the header part of the voice data in the object data) and the stroke start time (the earliest of the header part St of the reproduction stroke data included in the object data) and stores the difference as diffTime in the MEM 14 (S102).

Detailed Description Text (71):
When it is determined that the voice data is compressed (S104), the processor decompresses the data (S106), creates an interrupt event detection loop (S108), and starts reproduction of voice (S110).

Detailed Description Text (74):
When the reproduction of voice is determined to end (S114), the operator is notified of the end of the reproduction process, for example, by outputting such a predetermined sound as "zhang{character pullout}" (S132). Here, the determination of the end of the reproduction process of voice is made based on determination that the reproduction is completed up to the tail of the data stored in the voice file.

Detailed Description Text (75):
When it is determined in S100 that the kind of the reproduction object is only the voice data, the processor proceeds to S116 to determine whether the voice data is compressed (S116). When the voice data is compressed, the processor decompresses the data, creates an interrupt event detection loop, and starts reproduction of voice (S122). When the reproduction of voice is determined to end (S124), the operator is notified of the completion of the reproduction process (S132).

Detailed Description Text (76):
When it is determined in S100 that the kind of the reproduction object is only the stroke data, the processor goes to S126 to store 0 as diffTime in the MEM 14, creates an interrupt event detection loop (S128), and reproduce the stroke (S130). The reproduction routine of stroke will be described hereinafter referring to the flowchart of FIGS. 16A and 16B, as well as S112. When the reproduction of stroke is completed, the operator is notified of the end of the reproduction process (S132).

Detailed Description Text (78):
First, the number of strokes in the i th reproduction object is checked by analyzing the data in the body part of the data copied in S76 to count stroke data pieces, and this value is stored as numStrk in the MEM 14 (S140).

Detailed Description Text (81):
The strokes to be processed in S144 to S166 are the stroke data counted in S140, and they are selected as an object of the processes in S144 to S166 in order from the earliest stroke, based on comparison of St (input start time) in the header part of each stroke data. The stroke data as a processed object will be called hereinafter current stroke data.

Detailed Description Text (82):
The processor reads the attributes of the current stroke data (S146), determines a draw time of next stroke data nextDrawTime, and stores it in the MEM 14 (S148). This nextDrawTime is obtained by adding the difference between St of the current stroke

data and St of the next stroke data to the present time (the present time in the clock function in the apparatus).

Detailed Description Text (83):
The processor reads the number of points of the current stroke data from the MEM 14 and stores it as numPts in the MEM 14 (S150). This number of points is given by the value of n in the body part of the stroke data.

Detailed Description Text (86):
Then the processor is kept in a sleep state for the time set as diffPtTime (S160), draws a straight line connecting the coordinates stored as prePts with the coordinates of the i th point (S162), updates the data in the MEM 14 to set the difference between the i-th coordinate time (Pit) and the (i+1)th coordinate time (P(i+1)t) as a value of diffPtTime (S164), increments i by one (S166), and returns to S158.

Detailed Description Text (90):
Next described is the data in which a plurality of strokes drawn in the draw mode are grouped and handled as one object, as described previously, and which is stored as cluster data in the MEM 14.

Detailed Description Text (91):
FIG. 18 illustrates an example in which two objects are drawn in the draw mode. In this document there are an object 1100 composed of two strokes to indicate a tree, and an object 1020 composed of thirteen strokes to indicate the sun. When in the edit mode the vicinity of a stroke is clicked by cursor, the whole object including that stroke is selected and a circumscribed rectangle around the selected object is displayed based on the data of Ox, Oy, Cx, Cy in the header part of the selected object. This display of the circumscribed rectangle informs the operator that the object is selected and which strokes belong to the object. FIG. 18 shows a state in which the cursor 430 is located near one stroke of the object 1020 and clicked there whereby the object 1020 including that stroke is selected and the circumscribed rectangle 1021 around that object is displayed.

Detailed Description Text (95):
If it is determined in S234 that the data of curClstr is not grouped data, xOffset or yOffset is added to the rectangular information of curclstr, xOrigin or yOrigin, respectively (S238). After completion of the process of S236 or S238 to add xOffset and yOffset, the information of the root cluster is updated (S240). When the continuous press on the button of the mouse 20 is freed to end the drag, the processor determines the end of the movement instruction and replaces the data stored in the MEM 14 with the data updated in S236 to S240 as the data after movement, whereby the strokes are displayed as moved.

Detailed Description Text (96):
FIG. 22 is a diagram after completion of the movement process, in which the display of the object 1100 is updated to the position designated by the cursor. In the middle of the movement, as shown in FIG. 21, the object 1100 is displayed as held at the position upon the selection before the instruction of the movement and a stroke 1103 is displayed as moving following the cursor. This stroke 1103 is a temporary display during the movement, which is indicated based on the data in curClstr. However, this display does not reflect the attributes of the stroke and is given by a simple line (for example, the color of the line is black and the thickness of the line is finest), for easy change of display.

Detailed Description Text (98):
When the eraser mode button 803 is clicked, the mode is switched to the eraser mode and the mouse cursor is switched to an image of an eraser (an eraser cursor 1000 in an example of the screen in FIG. 24). In response to a press on the button of mouse 20 or a detection of pen down by the digitizer 24, the eraser cursor is displayed at that position and coordinate values thereof are stored as ptErase in the MEM 14(S180). The number of objects in the document is read from the data stored in the MEM 14 and is stored as numObj in the MEM 14 (S182). Then the counter i is initialized to 1 (S190). It is then determined whether i is not more than numObj (S192) and the processor goes to S194 in the case of affirmative determination. This determination of S192 about whether i is not more than numObj is repetitively carried out until i is determined to

be more than numObj, that is, until it is determined that the determination step of whether the position of the eraser cursor is included in an object (S194) has been carried out for the all objects counted in S182.

Detailed Description Text (101):
FIG. 25 illustrates an example in which the thirteen strokes are grouped as an object, as previously described in FIG. 18, and each stroke is handled as separate cluster data independent from the others. Dotted lines represent circumscribed rectangles of the respective clusters. Supposing the eraser cursor 1000 is located near the stroke 1026, it is determined in S206 that the position of the eraser cursor 1000 is a point near the stroke 1026 and the stroke 1026 is erased in S210. The screen in which the stroke 1026 is erased is illustrated in FIG. 26. After one cluster data forming the object is erased, the object 1021 is composed of the twelve remaining strokes. Although in FIG. 25 and FIG. 26 there are illustrated the frames of the dotted lines to explain the respective clusters, the frames of the dotted lines are not actually displayed in the eraser mode.

Detailed Description Text (104):
In the electronic mail, the processes carried out during preparation of document by the sender are the same as the above processes, and the following describes, referring to the flowchart of FIG. 27, a process for quoting a received mail when the receiver of the electronic mail including the stroke and voice data sends a reply mail.

Detailed Description Text (106):
The processor reads the original ink data comprised of the stroke data and voice data of the quoted mail from the memory area of MEM 14 storing the received data, and copies it onto the working area in the MEM 14 to store it (S254). Here, the term "ink data" means a stroke data and a data by which the stroke data is accompanied. Then the processor sets the value of xMove, stored in the MEM 14, as a value of xOffset and the value of yMove as a value of yOffset and stores them in the MEM 14 (S256).

Detailed Description Text (109):
In the flowchart of FIG. 27 the movement of the ink data (stroke data and voice data) was described, but the same process as the insertion of the inserting comment text and quotation symbol in the process of the text edit is carried out for the text included in the received mail. Therefore, the relative positional relation between the text data included in the received mail and the ink data is not changed between before and after the quotation process.

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Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases

Search Results -

Terms	Documents
L12 and detect$3	2

Database: US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L13

Refine Search

Recall Text | Clear

Search History

DATE: Wednesday, May 21, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=OR			
L13	L12 and detect$3	2	L13
L12	L11 and record$3 with position	2	L12
L11	L10 and record$3 with switch	3	L11
L10	L9 and stroke with data	3	L10
L9	L8 and signal	5	L9
L8	L7 and sound	5	L8
L7	L6 and coordinate with data	15	L7
L6	digitizer with record$3 with (pen or marker)	29	L6
L5	inform$4 with record$3 with (pen or marker) with (tablet)	0	L5
L4	inform$4 with record$3 with (pen or marker) with (tablet or stuyles)	0	L4
L3	L1 and(pen or marker)	15	L3
L2	L1 and tablet	1	L2
L1	((345/156)!.CCLS.) and record$3 with medium	51	L1

END OF SEARCH HISTORY